1. A controllable inductor, comprising:

first and second coaxial and concentric magnetic pipe elements comprising anisotropic material, wherein said elements are connected to one another at both ends by means of magnetic end couplers;

a first winding wound around both said magnetic pipe elements; and

a second winding wound around at least one of said magnetic pipe elements,

wherein a winding axis for the first winding is perpendicular to an axis of at least one of the magnetic pipe elements,

wherein a winding axis of the second winding coincides with the axis,

wherein, when energized, the first winding generates a magnetic field in a first direction that coincides to a direction of a first magnetic permeability,

wherein, when energized, the second winding generates a magnetic field in a second direction that coincides to a direction of a second magnetic permeability, and

wherein the first magnetic permeability is substantially higher than the second magnetic permeability.

2. The controllable inductor according to claim 1, wherein the anisotropic material is selected from a group consisting of grain oriented silicon steel and domain controlled high permeability grain oriented silicon steel.

3. The controllable inductor according to claim 1, wherein the magnetic end couplers are made of an anisotropic material and provide a low permeability path for the magnetic field created by the first winding and a high permeability path for the magnetic field created by the second winding.

4. The controllable inductor according to claim 1, further comprising a thin insulation sheet situated between magnetic pipe element edges and the end couplers.

5. The controllable inductor according to claim 1, wherein a volume of the magnetic end couplers is 10-20% of the volume of the magnetic pipe elements.

6. The controllable inductor according to claim 1, wherein a volume of the magnetic end couplers is 25-50% of the volume of the magnetic pipe elements.

7. The controllable inductor of claim 1 wherein the magnetic field direction introduced by the first winding is in an annular direction relative to the axis of at least one of the elements.

8. The controllable inductor of claim 1 wherein the magnetic field direction introduced by the second winding is in a radial direction relative to the axis of at least one of the elements.

9. A core for a magnetic controllable inductor, comprising:

first and second coaxial and concentric pipe elements, each pipe element comprising an anisotropic magnetic material and defining an axis;

wherein the pipe elements are connected to one another at both ends by means of magnetic end couplers, and

wherein the core presents a first magnetic permeability in a first direction parallel to the axes of the elements significantly higher than a second magnetic permeability in a second direction orthogonal to the elements' axes.

10. The controllable inductor according to claim 9, wherein the first and second pipe elements are made of a rolled sheet material comprising a sheet end and a coating of an insulation material.

11. The controllable inductor according to claim 9, the first pipe element comprising:

a first layer; a second layer; and a gap in a third direction parallel to the axes of the elements,

wherein the first layer and the second layer of the first pipe element are joined together by means of a micrometer thin insulating layer in a joint located between the first and second layers.

12. The controllable inductor according to claim 9, further comprising:

an air gap extending in an axial direction in each pipe element, and wherein first reluctance of the first element equals a second reluctance of the second element.

13. The controllable inductor according to claim 10, wherein the insulation material is selected from a group consisting of MAGNETITE-S and UNISIL-H.

14. The controllable inductor of claim 9 wherein a third magnetic permeability exists in the coupler in the annular direction relative to the axes of the elements,

wherein a fourth magnetic permeability exists in the coupler in a radial direction relative to the axes of the elements, and

wherein the fourth magnetic permeability is substantially greater than the third magnetic permeability.

15. A magnetic coupler device for connecting first and second coaxial and concentric pipe elements to one another to provide a magnetic core for a controllable inductor, comprising:

magnetic end couplers comprising anisotropic material, a low permeability path that coincides with a direction of a magnetic field created by a first winding, and a high permeability path that coincides with a direction of a magnetic field created by a second winding,

wherein the magnetic fields are created when the windings are energized.

16. The controllable inductor according to claim 15, wherein the first and second pipe elements are made from anisotropic magnetic material,

wherein a magnetic permeability in the direction of the magnetic field created by the first winding is significantly higher than a magnetic permeability in the direction of the magnetic field created by the second winding,

wherein the magnetic end couplers comprise grain-oriented-sheet metal with a transverse direction corresponding to a grain-oriented direction of the pipe elements in an assembled core, and wherein the grain-oriented direction corresponds to the transverse direction of the pipe elements in the assembled core to assure that the end couplers get saturated after the pipe elements.

17. The controllable inductor according to claim 15, wherein the magnetic end couplers further comprise at least one of single wires and stranded wires of magnetic material.

18. The controllable inductor according to claim 15, wherein the magnetic end couplers are produced by rolling a magnetic sheet material to form toroidal cores,

wherein the cores are sized and shaped to fit the pipe elements,

wherein the cores are divided into two halves along a plane perpendicular to the materials grain-oriented direction, and

wherein a magnetic coupler width is adjusted to make segments to connect the first pipe element to the second pipe element at pipe element ends.

19. The controllable inductor according to claim 15, wherein the magnetic end couplers comprise at least one of stranded and single wire magnetic material, wound to form a torus, and

wherein the torus is divided into two halves along a plane perpendicular to all the wires.

20. A controllable magnetic structure, comprising:

a closed magnetic circuit comprising, a magnetic circuit first element and a magnetic circuit second element, each of said first and second magnetic circuit elements comprising an anisotropic material having a high permeability direction;

a first winding wound around a first portion of the closed magnetic circuit; and

a second winding oriented orthogonal to the first winding,

wherein a first magnetic field is generated by the first winding in the high permeability direction of the first circuit element, and

wherein a second field is generated by the second winding in a direction orthogonal to the first field direction.

21. The controllable magnetic structure of claim 20 wherein the magnetic circuit first element is a pipe member and the magnetic circuit second element is an end coupler.

22. The controllable magnetic structure of claim 21 wherein the magnetic circuit first element comprises two pipe members located coaxially around an axis wherein the high permeability direction is an annular direction relative to the axis.

23. The controllable magnetic structure of claim 22 wherein the second high permeability direction is a radial direction relative to the axis.

24. The controllable magnetic structure of claim 20 wherein the controllable magnetic structure is an inductor.

25. The controllable magnetic structure of claim 20, further comprising grain oriented material.

26. The controllable magnetic structure of claim 25 wherein the grain oriented material is domain controlled high permeability grain oriented silicon steel.

27. The controllable magnetic structure of claim 20, further comprising insulation located in the closed magnetic circuit between the magnetic circuit first element and the magnetic circuit second element.

28. The controllable magnetic structure of claim 20 wherein a magnetic circuit second element volume is 10 –20% of a magnetic circuit first element volume.

29. The controllable magnetic structure of claim 20 wherein the second field direction corresponds to the second high permeability direction in the magnetic circuit second element.